

**In The United States Patent And Trademark Office**

Appl. No.: 10/725,355 Confirmation No.: 1296  
Applicant(s): Seymour et al.  
Filed: December 1, 2003  
Art Unit: 1791  
Examiner: Dennis R. Cordray  
Title: CIGARETTE PAPER TESTING APPARATUS AND ASSOCIATED METHOD

Docket No.: 030627/268881  
Customer No.: 00826

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF TRANSMITTAL**  
**(PATENT APPLICATION – 37 C.F.R. § 41.37)**

1. Transmitted herewith is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on March 7, 2008.
2.  Applicant claims small entity status.
3. Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:  
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Respectfully submitted,

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**APPEAL BRIEF UNDER 37 CFR § 41.37**

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed March 7, 2008.

1. ***Real Party in Interest.***

The real party in interest in this appeal is R.J. Reynolds Tobacco Company, the assignee of the above-referenced patent application.

2. ***Related Appeals and Interferences.***

There are no related appeals and/or interferences involving this application or its subject matter.

3. ***Status of Claims.***

Claims 1-3, 5-12, 14-19, 22-29 and 31 are pending in the application and claims 1-3, 5-12, 14-19, 22-29 and 31 stand rejected as unpatentable over a combination of prior art references

as set forth in greater detail below. The prior art rejection of all pending claims is appealed herein.

**4. *Status of Amendments.***

All claim amendments presented during prosecution were entered and are set forth in the clean copy of the pending claims appended to the brief. Claims 1, 10, 18 and 28 have been amended twice during prosecution. Claims 2, 8, 11, 17, 19, 25, 26, 29 and 31 have been amended once during prosecution. Claims 3, 5-7, 9, 12, 14-16, 22-24 and 27 are original as-filed claims. Claims 4, 13, 20, 21 and 30 have been canceled during prosecution.

**5. *Summary of Claimed Subject Matter.***

The present application discloses a cigarette paper testing apparatus and system, and a method of examining a length of a cigarette paper. For example, the apparatus can be used to examine a length of a cigarette paper comprising a first pattern (e.g. band) and a second pattern (e.g. band), with the patterns repeating along the length thereof.

Independent Claim 1 recites an apparatus (element 100) adapted to examine a length of a cigarette paper (element 200) comprising a pattern including a first band (element 225 or 250) and a second band (element 225 or 250), the pattern repeating along the length thereof, the apparatus comprising a second bobbin (element 300) configured to be capable of receiving the cigarette paper and to have the cigarette paper advanced thereto and wound thereon after the cigarette paper is unwound from a first bobbin (element 150) (*see Specification, page 7, lines 1-14*). Claim 1 further recites that the testing apparatus comprises a pattern detection device (element 450) disposed between the first and second bobbins and configured to receive the cigarette paper unwound from the first bobbin (*see Specification, page 7, lines 14-16*), the pattern detection device being configured to detect at least one of the bands and produce a signal in response thereto (*see Specification, pages 7-8, lines 31 and 1-4; page 18, lines 3-5; page 19, lines 20-30*). Claim 1 further recites that the testing apparatus comprises a testing device (element 550 or 600) in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, the testing device being configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands

in contemporaneous response to the signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin (*see Specification, page 7, lines 17-26; page 19, lines 22-30*).

Independent Claim 10 recites a system for examining a cigarette paper (element 200) and manufacturing a cigarette therefrom, the system comprising a cigarette manufacturing device (*see Specification, page 20, lines 19-21*) configured to manufacture the cigarette from a length of the cigarette paper, the cigarette paper having a pattern including a first band (element 225 or 250) and a second band (element 225 or 250), with the pattern repeating along the length thereof (*see Specification, page 7, lines 4-6*). Claim 10 further recites that the system comprises a cigarette paper testing apparatus (element 100) adapted to test one of the bands of the cigarette paper before the cigarette paper is used to manufacture the cigarette, the cigarette paper testing apparatus comprising a second bobbin (element 300) configured to be capable of receiving the cigarette paper and to have the cigarette paper advanced thereto and wound thereon after the cigarette paper is unwound from a first bobbin (element 150) (*see Specification, page 7, lines 1-14*), the second bobbin being configured to be received by the cigarette manufacturing apparatus so as to provide the cigarette paper thereto (*see Specification, page 7, lines 16-21*). Claim 10 further recites that the testing apparatus comprises a pattern detection device (element 450) disposed between the first and second bobbins and configured to receive the cigarette paper unwound from the first bobbin, the pattern detection device being configured to detect at least one of the bands and produce a band detection signal in response thereto (*see Specification, pages 7-8, lines 31 and 1-4; page 18, lines 3-5; page 19, lines 20-30*). Claim 10 further recites that the testing apparatus comprises a testing device (element 550 or 600) in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, the testing device being configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin (*see Specification, page 7, lines 17-26; page 19, lines 22-30*).

Independent Claim 18 recites a method of examining a length of a cigarette paper (element 200) having a pattern including a first band (element 225 or 250) and a second band

(element 225 or 250), the pattern repeating along the length thereof (*see Specification, page 7, lines 4-6*), said method comprising detecting at least one of the bands with a pattern detection device (element 450) disposed between the first (element 150) and second (element 300) bobbins as the cigarette paper is advanced to and wound on the second bobbin after being unwound from the first bobbin (*see Specification, page 17, lines 20-24*). Claim 18 further recites the method step of producing a band detection signal with the pattern detection device in response to the detection of the at least one of the bands (*see Specification, pages 7-8, lines 31 and 1-4; page 18, lines 3-5; page 19, lines 20-30*). Claim 18 further recites the method step of nondestructively measuring at least one of a porosity and a basis weight of at least one of the bands with a testing device (element 550 or 600) in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin (*see Specification, page 7, lines 17-26; page 19, lines 22-30*).

Independent Claim 28 recites an apparatus (element 100) adapted to examine a length of a cigarette paper (element 200) having opposed ends and comprising a pattern including a first band (element 225 or 250) and a second band (element 225 or 250), the pattern repeating along the length thereof (*see Specification, page 7, lines 4-6*), the apparatus comprising a driven roller device (element 295) configured to receive one of the ends and to advance the length of the cigarette paper in a machine direction (*see Specification, page 16, lines 26-31*). Claim 28 further recites that the apparatus comprises a tension device (elements 190, 195) configured to operably engage the cigarette paper prior to the driven roller device, with respect to the machine direction, and to cooperate with the driven roller device so as to maintain a tension on the cigarette paper therebetween (*see Specification, page 17, lines 6-15*). Claim 28 further recites that the apparatus comprises a pattern detection device (element 450) disposed between the driven roller device and the tension device (*see Specification, page 17, lines 20-24*), the pattern detection device being configured to receive the cigarette paper, to detect at least one of the bands, and to produce a band detection signal in response thereto (*see Specification, pages 7-8, lines 31 and 1-4; page 18, lines 3-5; page 19, lines 20-30*). Claim 28 further recites that the apparatus comprises a testing device (element 550 or 600) in communication with the pattern detection device and disposed

serially therewith between the driven roller device and the tension device, the testing device being configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal (see Specification, page 7, lines 17-26; page 19, lines 22-30).

6. ***Grounds of Rejection to be Reviewed on Appeal.***

Claims 1-3, 5, 6, 8-12, 14, 15, 17-19, 22, 23, 25-29 and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,966,218 to Bokelman et al. (“Bokelman”) in view of WO 03/019132 A1 (U.S. Patent Publication No. 2004/0187560 used for English translation) to Cholet (“Cholet”) and further in view of U.S. Patent Publication No. 2004/0122547 to Seymour et al. (“Seymour”).

Claims 7, 16 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Bokelman ‘218 patent in view of the Cholet ‘132 reference and further in view of the Seymour ‘547 publication and U.S. Patent No. 3,032,245 to George et al. (“George”).

7. ***Argument.***

In response to the Grounds of Rejections presented herein, the Applicants submit that the rejections set forth in the Final Office Action of pending Claims 1-3, 5-12, 14-19, 22-29 and 31 under 35 U.S.C. §103(a) **are improper** for the various reasons presented below.

I. In rejecting Claims 1-3, 5-12, 14-19, 22-29 and 31 under 35 U.S.C. §103(a), the Examiner has failed to consider the claimed invention as a whole, as required by MPEP 2141.02(II).

Claims 1, 10, 18, and 28 particularly recite a pattern detection device disposed between the first and second bobbins and configured to detect at least one of the bands and produce **a band detection signal** in response thereto. A testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, is configured to **nondestructively measure at least one of a porosity and a basis weight** of at least one of the bands **in contemporaneous response to the band detection signal, while the**

**cigarette paper is between the first and second bobbins** and before the cigarette paper is wound on the second bobbin.

In contrast, the Bokelman '218 patent discloses a bobbin optical inspection system that includes a rewinder machine configured to optically inspect banded paper unwound from a first bobbin by directing an elongated beam of light laterally across the paper. The elongated beam impinges on the surface of the paper and forms reflections. A line scan camera containing a linear CCD array receives the reflections and generates output signals that are processed by a line scan processor to generate data indicative of the spacing between bands, the width of the bands, and the contrast of the bands. After being inspected by the camera, the paper is rewound on a rewind bobbin.

The Cholet '560 reference discloses a permeability testing device for testing the permeability of a cigarette paper, and explicitly states that the disclosed permeability testing device and testing method is particularly applicable to "cellulose type fibre weave which consists of a succession of transverse segments of different densities and therefore of different permeability" whereby "the porous segments of the strip are not visible, and so it is not possible to initialise the position of the strip by a visual reference" because "the successive segments P1 and P2 of the strip cannot be distinguished visually. As a consequence, the only option for positioning of the strips is to measure, point by point, . . . the permeability of the strip along the longitudinal axis . . ." As such, Cholet discloses a permeability testing device that first performs a preliminary stage, which comprises a serial millimeter by millimeter permeability test along a paper to determine the periodicity of the bands of different porosity levels. In this regard, the Cholet '560 reference notes that this is "the only option for positioning of the strips" (Paragraph [0025]). In the preliminary stage, a permeability profile is first determined, and a processor then determines a sinusoidal curve therefrom. The processor then determines the abscissa of the sinusoidal curve, from which an advancement of the strip is determined to provide the desired positioning for performing the permeability tests. That is, the determined periodicity is then used in a measurement stage by the same permeability testing device to perform the permeability tests along the paper. The permeability testing device disclosed by the Cholet '560 reference is thus used to run a first test to determine the periodicity of the bands of

the paper, and then the same device is used to run a second test that uses the determined periodicity in order to perform the permeability tests along the paper.

The Seymour '547 reference discloses a cigarette manufacturing system/process whereby a band detection system generates a signal that affects other components of the system in the manufacturing process, such as a flying knife.

In this regard, the Bokelman '218 patent discloses only an optical inspection system for inspecting the paper, whereby a line scan camera containing a linear CCD array receives reflections from the paper and generates output signals that are processed by a line scan processor to generate data indicative of the spacing between bands, the width of the bands, and the contrast of the bands, but does not teach or suggest that any of the inspection stations generates a band detection signal upon inspection of the paper, wherein that band detection signal is used to contemporaneously trigger a testing device to measure at least one of a porosity and a basis weight of a band of the cigarette paper. That is, even if the device disclosed by the Bokelman '218 patent could be considered a "pattern detection device," the device merely outputs data indicative of the spacing, width, and contrast of bands, and does not generate a "band detection signal" for affecting any "testing device." Further, the citing of the Seymour '547 reference for the prospect of using "band detection devices to send signals to control other related processes," as "equivalent means for determining the location of the bands" ignores the fact that the Seymour '547 reference particularly implements a band detection system in the context of a cigarette manufacturing process, which is not relevant to a testing device in a system directed to the examination of a cigarette paper used in the manufacture of a cigarette, as particularly claimed in the pending claims.

Further, the Cholet '560 reference discloses a permeability testing device that first performs a preliminary stage, which comprises a serial millimeter by millimeter permeability test along a paper to determine the periodicity of the bands of different porosity levels, as "the only option for positioning of the strips" (Paragraph [0025]), wherein the determined periodicity is then used in a measurement stage by the same permeability testing device to perform the permeability tests along the paper. That is, the permeability testing device disclosed by the Cholet '560 reference is thus used to run a first test to determine the periodicity of the bands of the paper, and then the same device is used to run a second test that

uses the determined periodicity in order to perform the permeability tests along the paper. As such, even if the permeability testing device of the Cholet '560 reference could be considered a "pattern detection device" as well as a "testing device," the Cholet '560 reference does not teach or suggest implementing a separate and discrete pattern recognition device for locating the bands and generating a band detection signal, whereby a separate and discrete testing device (wherein a pattern recognition device and a testing device are particularly claimed as two separate elements in each of the subject independent Claims 1, 10, 18, and 28) contemporaneously responds via the band detection signal generated by the pattern recognition device. Thus, the permeability determination along the paper by the "testing device" of the Cholet '560 reference does not occur in contemporaneous response to a band detection signal communicated thereto by a pattern recognition device upon detection of a band, as particularly recited in the amended claims.

Thus, the Applicants submit that the cited references alleged by the final Office Action to obviate the pending claims collectively disclose:

- A) an optical inspection system for inspecting the paper which generate data indicative of the spacing between bands, the width of the bands, and the contrast of the bands, but does not teach or suggest that any of the inspection stations generates a band detection signal upon inspection of the paper, wherein that band detection signal is used to contemporaneously trigger a testing device (Bokelman);
- B) "equivalent means for determining the location of the bands" vis-à-vis a band detection system in the context of a cigarette manufacturing process, which is not relevant to a testing device in a system directed to the examination of a cigarette paper used in the manufacture of a cigarette, and does not teach or suggest any "testing device" for the cigarette paper (Seymour);
- C) a permeability testing device used to run a first test to determine the periodicity of the bands of a paper, wherein the same device is then subsequently used to run a second test that uses the determined periodicity in order to perform permeability tests along the paper (Cholet).

As such, the Applicants submit that the combination of the cited Bokelman, Seymour, and Cholet references in the Office Action to arrive at the alleged obviousness rejection appears to be “[a] statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art.” In this regard, MPEP §2143.01 particularly notes that this “[is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references.]”

In this regard, the final Office Action alleges that one of ordinary skill in the art at the time of the invention would have been motivated to combine the Bokelman ‘218 patent and the Cholet ‘560 reference by modifying one of the inspection stations of the Bokelman ‘218 patent to measure permeability “to save time and the cost of having to measure the permeability in a separate process.” See page 4, lines 1-4 of the final Office Action. The final Office Action further alleges that it would have been obvious to one of ordinary skill in the art at the time of the invention to use the band detection data of the Seymour ‘547 reference to detect the bands and generate signals to control the measurement of the porosity data, with the motivation being “to provide additional important data with less expenditure of time or money”. See page 4, lines 14-16 of the final Office Action.

The Applicants submit that, in this instance, such a broad motivation of saving time and/or money does not sufficiently provide an objective reason to combine the teachings of the references. In a recent case, the Federal Circuit noted that “knowledge of a problem and motivation to solve it are entirely different from motivation to combine particular references to reach the particular claimed method.” *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008). In this regard, the Office Action asserts a particular problem (saving time and/or money) common to any process, and any apparatus related thereto. That is, the Office Action has identified a problem (i.e., how to save time and/or money) and alleges one of skill in the art at the time of the invention would have been motivated to solve this problem; however, the Office Action does not provide a motivation to combine the cited references. As such, the Office Action fails to provide some objective reason to combine the teachings of the references.

The Applicants thus submit that the Bokelman '218 patent does not disclose any band detection signal generated by a pattern detection device for contemporaneously triggering a testing device to perform a porosity and/or basis weight measurement of a band of a banded cigarette paper. Further, the Cholet '560 reference does not teach or suggest implementing separate and discrete testing and pattern recognition devices, or a testing device configured to contemporaneously respond to a band detection signal generated by a pattern recognition device. In addition, the Seymour '547 reference does not disclose any "testing device" or any applicability of a band detection system to a testing device in a cigarette paper examination process. In this regard, the Applicants reiterate that the pattern detection device and the testing device recited by Claims 1, 10, 18, and 28 are individual elements that are serially disposed such that the bands of the cigarette paper are detected by the pattern detection device, which generates a band detection signal, and the porosity and/or basis weight of a band is measured by the testing device in contemporaneous response to the band detection signal communicated thereto by the pattern detection device, as the paper is advanced through those serially disposed elements. As such, the Applicants submit that the Bokelman '218, Cholet '560, and Seymour '547 references, either separately or in combination, do not teach or suggest the embodiments of the present invention as now claimed in Claims 1, 10, 18, and 28. Claims 1, 10, 18, and 28 now pending are therefore patentable over the Bokelman '218, Cholet '560, and Seymour '547 references, in addition to Claims 2, 3, 5-9, 11, 12, 14-17, 19, 22-27, 29, and 31 which depend therefrom.

II. The Examiner is relying upon impermissible hindsight in combining the cited references to arrive at the invention claimed presently in Claims 1-3, 5-12, 14-19, 22-29 and 31.

The Applicants further submit that the Office Action has impermissibly used hindsight and the teachings of the present application to reject the pending claims as being obvious over the cited references. See *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) (discussing the "importance of guarding against hindsight ... and resist[ing] the temptation to read into the prior art the teachings of the invention in issue" when considering the obviousness of a patent). In this instance, it appears that the Office Action has simply retraced the path of the Applicants with

hindsight, discounted the number and complexity of the alternatives that would have been possible for simply saving time and/or money in the process of testing/manufacturing cigarettes, and concluded that the invention as claimed was obvious. That is, if the initial goal of the Applicants was to save time and/or money in examining a length of a cigarette paper, then there would have been an infinite amount of possible improvements to consider. To that end, only impermissibly retracing the steps of the inventors with hindsight would lead one to arrive at the invention as claimed in the pending claims.

III. In rejecting Claims 1-3, 5-12, 14-19, 22-29 and 31 under 35 U.S.C. §103(a), the Examiner has failed to consider the Cholet reference as a whole, as required by MPEP 2141.02(VI), when considering what a skilled artisan would take therefrom.

The Cholet '560 reference discloses a permeability testing device for testing the permeability of a cigarette paper, and explicitly states that the disclosed permeability testing device and testing method is particularly applicable to "cellulose type fibre weave which consists of a succession of transverse segments of different densities and therefore of different permeability" whereby "the porous segments of the strip are not visible, and so it is not possible to initialise the position of the strip by a visual reference" because "the successive segments P1 and P2 of the strip cannot be distinguished visually. As a consequence, **the only option** for positioning of the strips **is to measure, point by point**, . . . the permeability of the strip along the longitudinal axis . . ." As such, the Cholet '560 reference discloses a permeability testing device that first performs **a preliminary stage**, which comprises **a serial millimeter by millimeter permeability test along a paper to determine the periodicity of the bands** of different porosity levels. In this regard, the Cholet '560 reference notes that this is "**the only option for positioning of the strips**" (Paragraph [0025]). In the preliminary stage, a permeability profile is first determined, and a processor then determines a sinusoidal curve therefrom. The processor then determines the abscissa of the sinusoidal curve, from which an advancement of the strip is determined to provide the desired positioning for performing the permeability tests. That is, the determined periodicity is then used in **a measurement stage** by **the same permeability testing device** to perform the permeability tests along the paper. The permeability testing device

disclosed by the Cholet '560 reference is thus used to run a first test to determine the periodicity of the bands of the paper, and then the same device is used to run a second test that uses the determined periodicity in order to perform the permeability tests along the paper.

In this regard, the final Office Action alleges that the Cholet '560 reference is cited for the teaching of a method of measuring permeability, and not for the detection of bands. See page 4, lines 4-6 of the final Office Action. This interpretation fails to consider the teachings of the Cholet '560 reference as a whole. As a whole, the Cholet '560 reference does not teach or suggest implementing separate and discrete testing and pattern recognition devices, or a testing device configured to contemporaneously respond to a band detection signal generated by a pattern recognition device. In contrast, the Cholet '560 reference discloses a single permeability device, albeit a device with limitations (as described previously), for performing both periodicity tests and permeability tests along the paper.

Thus, when considered as a whole, the Cholet '560 reference teaches away from a combination with the Bokelman '218 patent. That is, one of ordinary skill in the art would not look to the disclosure of the Cholet '560 reference for guidance in modifying the inspection device of the Bokelman '218 patent because, if the Bokelman '218 patent teaches measuring properties of the paper such as spacing, width and contrast of the bands, then there would be no need for the device of the Cholet '560 patent. In other words, the device of the Cholet '560 reference would complicate the inspection device of the Bokelman '218 patent by providing a redundant measure for measuring properties of the paper; but to take the device of the Cholet '560 reference for only its ability to measure permeability is to not consider the reference as a whole, as required.

As such, the Applicants submit that the Bokelman '218, Cholet '560, and Seymour '547 references, either separately or in combination, do not teach or suggest the embodiments of the present invention as now claimed in Claims 1, 10, 18, and 28. Claims 1, 10, 18, and 28 now pending are therefore patentable over the Bokelman '218, Cholet '560, and Seymour '547 references, in addition to Claims 2, 3, 5-9, 11, 12, 14-17, 19, 22-27, 29, and 31 which depend therefrom.

## 8. *Claims Appendix.*

The Claims Appendix, attached hereto, includes a clean copy of pending Claims 1-3, 5-12, 14-19, 22-29 and 31.

9. ***Evidence Appendix.***

No evidence has been submitted to the Examiner or relied upon by the Applicant.

10. ***Related Proceedings Appendix.***

There are no decisions by a court or the Board in related proceedings

**CONCLUSION**

In summary, Bokelman, Cholet, Seymour and George, alone or in any proper combination, do not teach or suggest the embodiments of the present invention, as claimed in Claims 1, 10, 18, 28 and the claims depending therefrom. As such, it is submitted that the present invention, as defined by the pending claims, is patentable over the references cited by the Final Office Action mailed November 8, 2007. Accordingly, a decision from the Board of Patent Appeals and Interferences reversing the final rejection of the pending claims is earnestly solicited.

Respectfully submitted,

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## **CLAIMS APPENDIX**

## **CLAIMS APPENDIX**

1. (Previously presented) An apparatus adapted to examine a length of a cigarette paper comprising a pattern including a first band and a second band, the pattern repeating along the length thereof, the apparatus comprising:

a second bobbin configured to be capable of receiving the cigarette paper and to have the cigarette paper advanced thereto and wound thereon after the cigarette paper is unwound from a first bobbin;

a pattern detection device disposed between the first and second bobbins and configured to receive the cigarette paper unwound from the first bobbin, the pattern detection device being configured to detect at least one of the bands and produce a signal in response thereto; and

a testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, the testing device being configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin.

2. (Previously presented) An apparatus according to Claim 1 wherein the second bobbin is responsive to the signal to selectively stop advancement of the cigarette paper to the second bobbin and the testing device is contemporaneously responsive to the signal to nondestructively measure at least one of the porosity and the basis weight of the at least one of the bands when advancement of the cigarette paper is stopped.

3. (Original) An apparatus according to Claim 1 wherein the second bobbin is adapted to be received by a cigarette manufacturing machine such that the cigarette paper wound thereon can be used to manufacture a cigarette.

4. (Cancelled)

5. (Original) An apparatus according to Claim 1 further comprising a drive system capable of being operably engaged with the second bobbin so as to wind the cigarette paper thereon, the drive system being operably engaged with the pattern detection device and responsive thereto so as to allow selective advancement of the cigarette paper onto the second bobbin.

6. (Original) An apparatus according to Claim 1 further comprising a brake system operably engaged with the first bobbin and configured to cooperate therewith so as to maintain a tension on the cigarette paper between the first bobbin and the second bobbin.

7. (Original) An apparatus according to Claim 1 further comprising a paper-engaging member configured to operably engage the cigarette paper between the first and second bobbins so as to maintain a tension on the cigarette paper.

8. (Previously presented) An apparatus according to Claim 1 further comprising a controller in communication with the pattern detection device and the testing device, the controller being configured to control advancement of the cigarette paper onto the second bobbin in response to the signal from the pattern detection device and to direct the testing device to nondestructively measure at least one of the porosity and the basis weight of the cigarette paper in direct response to the signal.

9. (Original) An apparatus according to Claim 1 wherein the first bobbin is interchangeable with the second bobbin.

10. (Previously presented) A system for examining a cigarette paper and manufacturing a cigarette therefrom, the system comprising:

a cigarette manufacturing device configured to manufacture the cigarette from a length of the cigarette paper, the cigarette paper having a pattern including a first band and a second band, with the pattern repeating along the length thereof; and

a cigarette paper testing apparatus adapted to test one of the bands of the cigarette paper before the cigarette paper is used to manufacture the cigarette, the cigarette paper testing apparatus comprising:

a second bobbin configured to be capable of receiving the cigarette paper and to have the cigarette paper advanced thereto and wound thereon after the cigarette paper is unwound from a first bobbin, the second bobbin being configured to be received by the cigarette manufacturing apparatus so as to provide the cigarette paper thereto;

a pattern detection device disposed between the first and second bobbins and configured to receive the cigarette paper unwound from the first bobbin, the pattern detection device being configured to detect at least one of the bands and produce a band detection signal in response thereto; and

a testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, the testing device being configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin.

11. (Previously presented) A system according to Claim 10 wherein the second bobbin is responsive to the band detection signal to selectively stop advancement of the cigarette paper to the second bobbin and the testing device is contemporaneously responsive to the band detection signal to nondestructively measure at least one of the porosity and the basis weight of the at least one of the bands when advancement of the cigarette paper is stopped.

12. (Original) A system according to Claim 10 wherein the first bobbin is interchangeable with the second bobbin.

13. (Cancelled)

14. (Original) A system according to Claim 10 further comprising a drive system capable of being operably engaged with the second bobbin so as to wind the cigarette paper thereon, the drive system being operably engaged with the pattern detection device and responsive thereto so as to allow selective advancement of the cigarette paper onto the second bobbin.

15. (Original) A system according to Claim 10 further comprising a brake system operably engaged with the first bobbin and configured to cooperate therewith so as to maintain a tension on the cigarette paper between the first bobbin and the second bobbin.

16. (Original) A system according to Claim 10 further comprising a paper-engaging member configured to operably engage the cigarette paper between the first and second bobbins so as to maintain a tension on the cigarette paper.

17. (Previously presented) A system according to Claim 10 further comprising a controller in communication with the pattern detection device and the testing device, the controller being configured to control advancement of the cigarette paper onto the second bobbin in response to the band detection signal from the pattern detection device and to direct the testing device to nondestructively measure at least one of the porosity and the basis weight of the cigarette paper in direct response to the band detection signal.

18. (Previously presented) A method of examining a length of a cigarette paper having a pattern including a first band and a second band, the pattern repeating along the length thereof, said method comprising:

detecting at least one of the bands with a pattern detection device disposed between the first and second bobbins as the cigarette paper is advanced to and wound on the second bobbin after being unwound from the first bobbin;

producing a band detection signal with the pattern detection device in response to the detection of the at least one of the bands; and

nondestructively measuring at least one of a porosity and a basis weight of at least one of

the bands with a testing device in communication with the pattern detection device and disposed serially therewith between the first and second bobbins, in contemporaneous response to the band detection signal, while the cigarette paper is between the first and second bobbins and before the cigarette paper is wound on the second bobbin.

19. (Previously presented) A method according to Claim 18 further comprising selectively stopping advancement of the cigarette paper to the second bobbin in response to the band detection signal and, in contemporaneous response to the band detection signal, nondestructively measuring at least one of the porosity and the basis weight of the at least one of the bands when advancement of the cigarette paper is stopped.

20-21. (Cancelled)

22. (Original) A method according to Claim 18 further comprising selectively advancing the cigarette paper onto the second bobbin with a drive system operably engaged therewith, the drive system being operably engaged with the pattern detection device and responsive thereto so as to determine the selective advancement of the cigarette paper.

23. (Original) A method according to Claim 18 further comprising maintaining a tension on the cigarette paper between the first bobbin and the second bobbin with a brake system operably engaged and cooperable with the first bobbin.

24. (Original) A method according to Claim 18 further comprising maintaining a tension on the cigarette paper with a paper-engaging member configured to operably engage the cigarette paper between the first and second bobbins.

25. (Previously presented) A method according to Claim 18 further comprising controlling advancement of the cigarette paper onto the second bobbin, in response to the band

detection signal from the pattern detection device, with a controller in communication with the pattern detection device and the testing device.

26. (Currently Amended) A method according to Claim 18 wherein nondestructively determining a property further comprises directing the testing device to nondestructively nondestructively measure at least one of the porosity and the basis weight of the cigarette paper, in direct response to the band detection signal, with a controller in communication with the pattern detection device and the testing device.

27. (Original) A method according to Claim 18 further comprising removing the second bobbin and replacing the second bobbin with the first bobbin.

28. (Previously presented) An apparatus adapted to examine a length of a cigarette paper having opposed ends and comprising a pattern including a first band and a second band, the pattern repeating along the length thereof, the apparatus comprising:

a driven roller device configured to receive one of the ends and to advance the length of the cigarette paper in a machine direction;

a tension device configured to operably engage the cigarette paper prior to the driven roller device, with respect to the machine direction, and to cooperate with the driven roller device so as to maintain a tension on the cigarette paper therebetween;

a pattern detection device disposed between the driven roller device and the tension device, the pattern detection device being configured to receive the cigarette paper, to detect at least one of the bands, and to produce a band detection signal in response thereto; and

a testing device in communication with the pattern detection device and disposed serially therewith between the driven roller device and the tension device, the testing device being configured to nondestructively measure at least one of a porosity and a basis weight of at least one of the bands in contemporaneous response to the band detection signal.

29. (Previously presented) An apparatus according to Claim 28 wherein the driven roller device is responsive to the band detection signal to selectively stop advancement of the cigarette paper and the testing device is contemporaneously responsive to the band detection signal to nondestructively measure at least one of the porosity and the basis weight of the at least one of the bands.

30. (Cancelled)

31. (Previously presented) An apparatus according to Claim 28 further comprising a controller in communication with the pattern detection device and the testing device, the controller being configured to control advancement of the cigarette paper by the driven roller device in response to the band detection signal from the pattern detection device and to direct the testing device to nondestructively measure at least one of the porosity and the basis weight of the cigarette paper in direct response to the band detection signal.

## **EVIDENCE APPENDIX**

**NONE**

## **RELATED PROCEEDINGS APPENDIX**

**NONE**